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ABSTRACT

This press release reports selected information about the nation's 1994 high school graduates who took the ACT Assessment as part of their preparation for college. States, districts, and schools receive similar information and control the release of that information. The American College Testing program (ACT) reports only on national data. The national mean composite score increased to 20.8, on a scale to 36, from 20.7 in 1993. This is the second consecutive increase following 3 years of steady scores. This national mean is derived from individual scores of more than 890,000 in 1994 high school graduates. Students' scores are rising largely because more are taking college preparatory coursework. Selection of academic courses has long been associated with scores on the ACT Assessment. Data indicate that greater numbers of females are taking advanced mathematics and science courses, a finding that is beginning to be reflected in the composite scores. Females are also starting to take the ACT in greater numbers, with more females than males taking the test nationwide. Seven tables summarize test results. (SLD)

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News from ACT

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ACT SCORES UP FOR SECOND STRAIGHT YEAR, FEMALES MAKE GREATEST STRIDES

Iowa City, IA -- The national mean composite score on the ACT Assessment, an entrance exam taken by some 60 percent of America's college freshmen, increased this year to 20.8, on the scale of 1 to 36, from 20.7 in 1993. This was the second consecutive increase following three years of steady scores. The national mean is derived from the individual scores of the more than 890,000 1994 high school graduates who took the ACT Assessment.

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ACT Assessment National Composite Means, 1990-1994, with High School Graduates Tested (in 1,000s)

	1990	1991	1992	1993	1994
Mean	20.6	20.6	20.6	20.7	20.8
Tested Graduates	817	797	832	876	892

"This second consecutive increase indicates that American students are continuing the gradual improvement in college-readiness that we've been observing recently," said ACT President Richard L. Ferguson.

"The improvement is very encouraging to those of us supporting students as they move toward achieving the national education goals for the year 2000, one of which is that our high school graduates will demonstrate competency in challenging subject matter, and another of which is to be first in the world in science and math achievement. Some may think these goals, especially the latter, lofty, but they're targets for teachers and students across the country. So, although we still face the challenge of getting even more college-bound students the preparation they need in math and science, ACT Assessment scores are one standard by which we can say progress is being made."

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Students' scores are rising, according to Ferguson, largely because more of them are taking college-preparatory coursework. ACT research consistently has shown that academic preparation--the kinds of courses students take in high school--is the factor most strongly associated with performance on the achievement-based ACT Assessment.

ACT defines a core program as four years or more of English and three years or more each of social sciences, natural sciences and mathematics (algebra and higher). Any program that includes fewer courses in any of these subject areas is less than core.

Over 57 percent of the ACT-tested 1994 high school graduates reported taking core coursework, 2.4 percent more than in 1993 and a gain of 19.2 percent since 1987. Those reporting that they had taken the college-preparatory courses now outnumber those reporting less than a core program by almost 120,000.

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Percentage of ACT-Tested Students Reporting Core Coursework 1987-1994

1987	1988	1989	1990	1991	1992	1993	1994
37.9	42.6	46.1	48.4	50.8	52.9	54.7	57.1

"There's a lot of talk about educational standards these days," said Ferguson, "and, as a nation, we're still working toward a consensus on what our standards should be. But one standard on which most would agree is that college-bound students be ready for college-level coursework. And in that light, ACT scores can be related to performance in specific courses, as indicated by course grades, in addition to core preparation."

For several years, ACT has related the actual grades given in English, algebra, calculus, chemistry and physics courses at dozens of colleges and universities to the recipients' scores on the four tests of the ACT Assessment in order to determine the typical ACT test scores that indicate the likelihood of earning a grade of B or better in those courses.

Of the 891,714 ACT-tested graduates in the class of 1994, according to this research, 40 percent of those who reported having taken core coursework are likely to earn a B or better in

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a typical college algebra course, while only 16 percent of those who reported less than core coursework also are likely to do so.

Most students' level of preparation for calculus is lower than it is for algebra. Only 21 percent of those who have taken core coursework and only 7 percent of those with less than core are likely to earn at least a B in calculus.

ACT Assessment Scores as Predictors of Grades for 1994 College Freshmen

College Course	ACT Assessment Test	Critical ACT Score[1]	Percentage at or Above Critical ACT Score	
			With Core Coursework	With Less than Core
English				
Composition	English	18	77	56
Advanced Composition	English	21	57	41
Literature	English	21	57	34
Mathematics				
Elementary Algebra	Mathematics	19	70	39
Intermediate Algebra	Mathematics	22	46	20
College Algebra	Mathematics	23	40	16
Calculus	Mathematics	26	21	7
Science				
Chemistry	Science Reasoning	23	43	22
Physics[2]	Science Reasoning	20	71	46

[1]At which a student has an even chance of earning a grade of B or better.
[2]Includes algebra-based as well as calculus-based courses.

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"These critical ACT scores signify levels at which students can be said to be prepared for these college courses," Ferguson said. "Those students whose scores are higher are even better prepared, while, on the other hand, those who score below these levels, though they may pass the course, are much more likely to need remedial classes or other interventions designed to fill the gaps in their high school preparation.

"Based on their ACT Assessment test scores, the majority of our 1994 high school graduates appear to be prepared to perform B-level college work in freshman composition and in physics but not in calculus or in chemistry."

On the evidence of the relationship between ACT scores and college grades, Ferguson said, educators will still need to motivate the many students not following a core program to take the additional courses that will maximize their readiness for college. "But we're encouraged," he added, "by the gradual improvement we've seen in preparation, especially on the part of female students."

Since 1987, the percentages of ACT-tested females taking advanced mathematics and science courses have increased

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significantly. An additional 12 percent, for example, now take a second year of algebra, and 14 percent more take chemistry.

"The data indicate that greater numbers of females are electing advanced science and math courses," said Ferguson, "to the point that the course-taking percentages of females and males are now closer than they've ever been, and are even the same for advanced algebra and chemistry."

Percentages of ACT-Tested Males & Females Taking Algebra II & Chemistry, 1987-1994

Algebra II	1987	1990	1993	1994
Males	78	81	85	86
Females	74	80	84	86
Difference	4	1	1	0
Chemistry				
Males	69	73	77	78
Females	64	70	76	78
Difference	5	3	1	0

"Female students have always scored well on portions of the ACT Assessment," Ferguson said, "but, as a group, they've often trailed in their composite score. For high achievement, courses such as algebra I, geometry and biology are necessary but not

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sufficient preparation. College-bound students also need to take algebra II, trigonometry, chemistry and physics."

As the proportion of females taking core courses has increased, their mean ACT composite score has also increased. That score for females in 1994 is 20.7, compared to 20.5 in 1993.

"The scores of males have been holding steady in recent years," Ferguson said, "while those of females have been gradually increasing. This year's two-tenths of a point difference between the composite scores of males and females is the smallest in the history of the ACT Assessment."

ACT Composite Scores for Males and Females
1990-1994

	1990	1991	1992	1993	1994
Males	21.0	20.9	20.9	21.0	20.9
Females	20.3	20.4	20.5	20.5	20.7
Difference	0.7	0.5	0.4	0.5	0.2

In addition to continuing to raise their average score, females are taking the ACT Assessment in greater numbers. Nearly 100,000 more females than males now take the ACT.

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"It would appear that the increase in the national mean this year can be attributed largely to the performance of females," Ferguson said. "There are more of them, and they're taking more of the courses they need for college, which, in turn, leads to better performance on the ACT Assessment."

Further evidence of improved female achievement is seen when students are grouped according to their planned educational major, which is one indicator of similarity in academic preparation. In most of these major areas, even those with a science or mathematics orientation, females are achieving at levels equal to or higher than those of males.

Mean 1994 ACT Composite Scores for Females and Males Planning Selected Educational Majors

Major	Females	Males
Agriculture & Agricultural Technology	20.3	18.8
Architecture & Environmental Design	20.7	20.3
Business & Management	20.1	20.3
Communications & Communications Technology	21.1	20.6
Education	20.2	20.0
Engineering	23.3	22.8
Engineering-Related Technology	21.0	20.4
Health Sciences & Allied Health	20.3	21.5
Mathematics	24.1	24.1
Sciences	23.2	23.4

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The number of ACT-tested seniors reporting themselves to be members of a racial or ethnic minority group increased only slightly this year, to 22.2 percent, as compared to 21.4 percent in 1993. Although there were no appreciable gains in the scores of these groups, with the exception of American Indian/Alaskan Natives, whose average composite score rose 0.1 of a point, minority students, like others, continued to demonstrate wide score differences--as much as an average of 2.9 scale points--between those with core preparation and those without.

Average 1994 Minority-Group ACT Composite Scores by Level of Academic Preparation

	With Core	Less than Core
African American/Black	18.0	16.0
American Indian/Alaskan Native	20.0	17.3
Asian American/Pacific Islander	22.5	19.9
Mexican American/Chicano	19.6	17.1
Puerto Rican/Cuban/Other Hispanic	20.5	17.6

The ACT Assessment is administered by ACT, a nonprofit organization that provides measurement and research services to people of all ages who need to make informed decisions about their education, training and careers.

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